

TEVEROVSKIY, V.I.

Concerning N.M.Litsyn's article "Relay control of linear-  
asymmetric objects". Avtom. i telem. 23 no.7:987-988 J1  
'62. (MIRA 15:9)

(Automatic control)

ACCESSION NR: AP4033357

S/0103/64/025/003/0339/0346

AUTHOR: Teverovskiy, V. I. (Dnepropetrovsk)

TITLE: Method for analyzing periodic conditions in an on-off system containing two arbitrarily connected relays

SOURCE: Avtomatika i telemekhanika, v. 25, no. 3, 1964, 339-346

TOPIC TAGS: automatic control, relay automatic control, on off automatic control, 2 relay automatic system

ABSTRACT: A new method, derived from Ya. Z. Tsy\*pkina's frequency method, deals with 2-position relays that have symmetrical hysteresis characteristics without deadband; a block diagram of the on-off system in question is shown in Enclosure 1. The system behavior is described by these equations:

$$\begin{aligned} x_1 &= f_1 - z_{11} - z_{21}, & x_2 &= f_2 - z_{22} - z_{12}, & z_{ik} &= W_{ik}(p)y_i, \\ y_i &= \varphi_i(x_i) & (i, k &= 1, 2). \end{aligned}$$

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ACCESSION NR: AP4033357

Here,  $\varphi_i$  are the relay functions and  $W_{ik}(p)$  are operators of the system linear part;  $(\dot{p} \equiv d/dt)$ . The simplest periodical conditions with a period  $2T = 2\pi/\omega_0$  can exist in the system; all system variables are periodic symmetrical functions of time  $t$ .

$$\text{Then: } \ddot{x}_1\left(\frac{\pi}{\omega_0}\right) = -\chi_{01}, \quad \dot{\ddot{x}}_1\left(\frac{\pi}{\omega_0} - 0\right) < 0,$$

$$\ddot{x}_1(t) > -\chi_{01} \text{ with } 0 < t < \frac{\pi}{\omega_0},$$

$$\ddot{x}_2\left(\tau + \frac{\pi}{\omega_0}\right) = -\ddot{x}_2(\tau) = -\chi_{02},$$

$$\dot{\ddot{x}}_2\left(\frac{\pi}{\omega_0} + \tau - 0\right) = -\dot{\ddot{x}}_2(\tau - 0) < 0,$$

$$\ddot{x}_2(t) > -\chi_{02} \text{ with } \tau < t < \tau + \frac{\pi}{\omega_0},$$

where

$$0 < \tau < 2\pi/\omega_0.$$

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ACCESSION NR: AP4033357.

Parameters  $\omega_0$  and  $\tau$  of self-oscillations with  $(f_1 \equiv f_2 \equiv 0)$  and of forced oscillations are determined, as well as the stability of such oscillations. The results are applicable to an analysis of 2-loop and single-loop systems if the frequency characteristics of their linear parts are known. Orig. art. has: 5 figures and 33 formulas.

ASSOCIATION: none.

SUBMITTED: 03Dec63

DATE ACQ: 15May64

ENCL: 01

SUB CODE: DP, IE

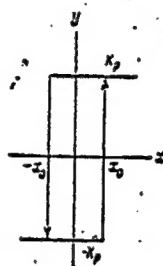
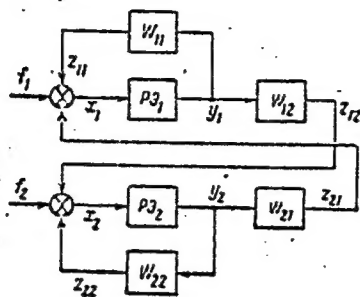
NO REF SOV: 006

OTHER: 000

Card 3/4

ACCESSION NR: AP4033357

ENCLOSURE: 01



An on-off automatic-control system containing 2 arbitrarily connected relays

Relay-element characteristic

4/4

Card

L 9007-66

EWT(d)/EPF(n)-2/ENP(1)

IJP(c)

WW/BC

ACC NR: AP5027898

SOURCE CODE: UR/0103/65/026/011/2044/2050

AUTHOR: Teverovskiy, V.I. (Dnepropetrovsk)

ORG: none

TITLE: Selfoscillations of relay systems containing a component with stepwise changing parameters

SOURCE: Avtomatika i telemekhanika, v. 26, no. 11, 1965, 2044-2050

TOPIC TAGS: oscillation, electric relay, automatic control system, servomechanism, control system stability, AUTOMATIC CONTROL THEORY 9

ABSTRACT: Earlier, the author constructed relationships which make it possible, by using the frequency method of Ya. Z. Tsypkin (Teoriya releynykh sistem avtomaticheskogo regulirovaniya. Gostekhizdat, 1955.), to analyze the stability and to determine the parameters of the periodic mode of operation of a relay automatic control system (RACS) containing a component with parameters changing in a stepwise manner with a change in the output coordinate of the relay component. A later work by the author presents a method of determining the parameters of selfoscillations of such a RACS by

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UDC: 62-504.3

L 9007-66

ACC NR: AP5027898

3  
means of the L.S. Gol'dfarb (O nekotorykh nelineynostyakh v sistemakh regulirovaniya. Avtomatika i telemekhanika, t. VIII, No. 5, 1947.) approximation method. The present article investigates the effect of the variation of the component parameters on the nature and condition of existence of the selfoscillations. It is found that the variations of the parameters of even a single component may lead to a quantitative and qualitative variation of the periodic mode of operation. An increase in the time constant of the driver of the servomechanism in the intervals leads to the appearance of difficult-to-repress LF selfoscillations. A specially organized periodic increase in the time constant may be the means of decreasing the periodic constituent error of the system and an expansion of the passband (through an increase in the selfoscillation frequency). Author expresses gratitude to Ya. Z. Tsypkin for his attention to this work, and to Z. A. Didenko and V.S. Abramov for assistance in illustrating the article. Orig. art. has: 8 figures and 17 formulas.

SUB CODE: IE, EE, EC / SUBM DATE: 09Jul64 / ORIG REF: 007 /

gc  
Card 2/2

L 17852-66 EWA(h)/EWT(1)  
ACC NR: AP6004552

SOURCE CODE: UR/0103/66/000/001/0087/0094

AUTHOR: Taverovskiy, V. I. (Dnepropetrovsk)

ORG: None

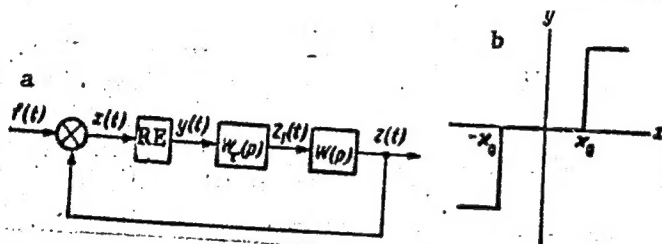
30  
8

TITLE: The periodic operation of a relay system with variable "pure" delay 25

SOURCE: Avtomatika i telemekhanika, no. 1, 1966, 87-94

TOPIC TAGS: automatic control, relay system

ABSTRACT: The article presents the methodology for the analysis of periodic operations of automatic relay systems containing an element with variable "pure" delay (Fig. 1).



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UDC: 62-504.3

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L 17852-66

ACC NR: AP6004552

Fig. 1. Single-loop automatic relay system.  
RE - relay element with the symmetrical characteristic,  
b;  $\bar{W}_Y(p) = e^{-pT}$ , with  $T$  - variable delay;  $W(p)$  -  
operator of that part of the system with time-constant  
parameters.

The author discusses the characteristics of the relay, derives expressions describing the stability of periodic operation, and investigates in considerable detail the influence of the change in delay time on the conditions for self-oscillation excitation. Orig. art. has: 27 formulas and 4 figures.

SUB CODE: 13 / SUM DATE: 10May65 / ORIG REF: 004

Card 2/2 nst

L 28464-66 EWT(d)/EWT(m)/ENP(c)/ENP(v)/T/ENP(t)/ETI/ENP(k)/ENP(l)/ETC(m)-6 IJP(c)

ACC NR: AP6010271 JD/HW

SOURCE CODE: UR/0381/66/000/001/0024/0034

AUTHOR: Samsonov, Yu. I.; Taverovskiy, V. I.; Anikeev, Ya. F.; Spil'nik, V. F.; Butenko, A. I.; Vit'ko, P. I. 56

ORG: Ukrainian Scientific Research Tube Institute (Ukrainskiy nauchno-issledovatel'skiy trubnyy institut); Nikopol' Southern Tube Plant (Nikopol'skiy yuzhnotrubnyy zavod) 6

TITLE: Quality control of thin-walled tubes 14

SOURCE: Defektoskopiya, no. 1, 1966, 24-34

TOPIC TAGS: ultrasonic flaw detector, flaw detection, metal tube, quality control/UDT-4 ultrasonic flaw detector, IDTs-3M ultrasonic flaw detector 26 10

ABSTRACT: The article presents the results of the research and development work on UDT-4 ultrasonic flaw finders at the Ukrainian Scientific Research Tube Institute and compares their performance with that of the IDTs-3M ultrasonic flaw finder. The UDT-4 pulsed ultrasonic flaw finder is designed for the quality control of thin-walled tubes through the excitation of normal waves in their walls. It consists of an electronic unit and a mechanical-acoustical part. The inspected tube is drawn through the device. If a flaw is present, a lamp glows on the panel of the electronic unit and at the same time the tube-drawing mechanism halts. The defective spot is pinpointed and subse-

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UDC: 620.179.16

L 28161-66

ACC NR: AP6010271

quently metallographically examined. The UDT-4 reliably reveals defects of the scale, film, scratch, crack and other types. Compared with the IDTs-3M the UDT-4 has a slower tube-drawing mechanism. On the other hand, the IDTs-3M is inferior in that it cannot be used to inspect bent or curved tubes and it involves vibration of the tube, which generates spurious signals. This comparison implies that a new flaw finder embodying the advantages of both devices can be developed. The UDT-4 in its present form may be used for high-speed flaw detection in shops fabricating a broad range of thin-walled precision tubes if the device is so modified as to use several ultrasonic pickups aligned along the tube axis. Thus, e.g. if 5-6 pickups with beam width of 10 mm each are used to inspect tubes rotating at the rate of 200 RPM, a productivity of approximately 600 m/hr or more than 4000 m per shift may be achieved. In mass production of tubes of a limited range of types, on the other hand, it is best to use ultrasonic flaw finders with a series of pickups mounted over the tube perimeter. Orig. art. has: 5 figures.

SUB CODE: 13, 11, 20/ SUBM DATE: 27Oct64/ ORIG REF: 001

Card 2/2 *IC*

L 46715-66 ENT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(l) IJP(c)

ACC NR: AP6023646

JD/HW

SOURCE CODE: UR/0381/66/000/002/0044/0051

AUTHOR: Anikeyev, Ya. F.; Teverovskiy, V. I.; Panikov, N. N.

ORG: All-Union NII of the Tube Industry (Vsesoyuznyy NII trubnoy promyshlennosti)

TITLE: Ultrasonic flaw detection in tubes of small diameter

SOURCE: Defektoskopiya, no. 2, 1966, 44-51

TOPIC TAGS: ultrasonic flaw detection, metallographic examination, metal tube

ABSTRACT: Ultrasonic flaw detection was studied in nonmagnetic tubes of 4-10 mm diameter and 0.1-0.8 mm wall thickness. Experiments were carried out on various ultrasonic instruments: IDTs-3M (TsNIITMASH), UDT-4 (VNITI) and the IDTs-5. While the IDTs-5 machine performed best, it had to be modified to handle smaller tube diameters; the IDTs-5 was rated for 6-10 mm tubes with 0.1-0.8 mm wall thicknesses. 2-3 mm long defects at a depth of 0.03-0.05 mm were detected. The IDTs-5 pickup was modified to focus the ultrasonic waves in order to detect defects 0.5 mm long at a depth of 0.015 mm when operated at frequencies up to 5 megacycles/sec. Pictures of the new type pickup head show its 6 components, the distribution of angles during the reflection of ultrasonic waves off the surfaces of tubes and a separate design scheme for a head, which completely encircled the tube to be inspected. General views were also shown of the device in actual operation. Details of the electronic storage circuit are included.

UDC: 620.179.16

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L 46715-66

ACC NR: AP6023646

ed. Operating procedures are described and test results on tubes of various diameters are presented. Micrographs (100x) illustrate the types of defects discovered by the modified apparatus: lines, cracks and scale-markings--all on internal surfaces. The apparatus was calibrated by forming artificial defects of measurable sizes on the internal surfaces of the tubes and comparing the recorded data with natural defects. Industrial trials at three different plants were successful; the equipment consistently detected flaws as small as 5-7% of the wall thicknesses. Orig. art. has: 9 figures.

SUB CODE: 14,09/

SUBM DATE: 27Sep65/

ORIG REF: 001

Card 2/2 fv

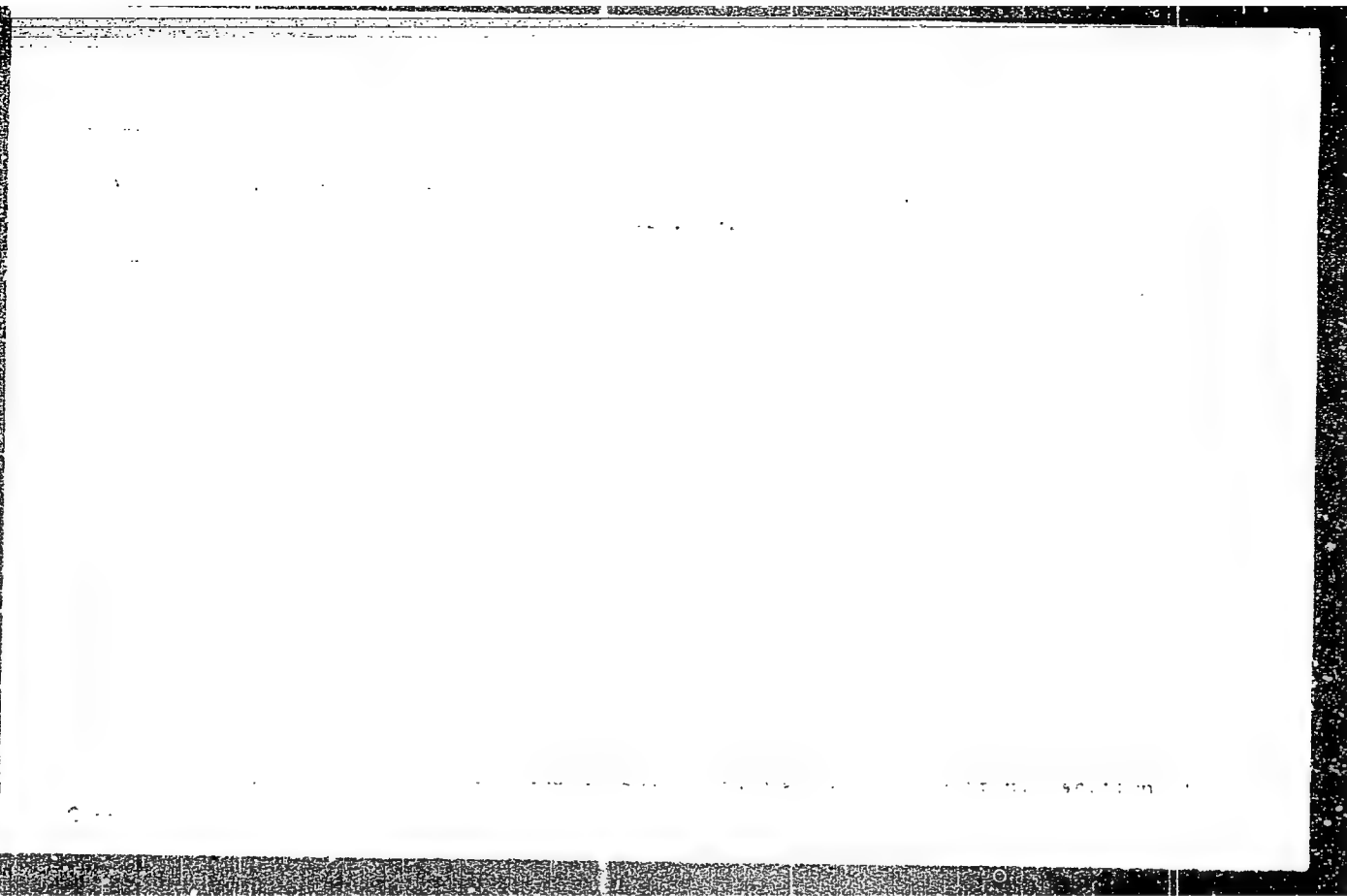
NIKOLAYENKO, A.T. & ZVEREVSKIY, V.I.: ANKHEIN. Izv. P. S. 1974, 7.5.

Ultrasonic control of screw-on soldering. D. 1974, 1.  
no. 31743 1975. (MIRA 1314)

1. Ukrainskiy nauko-fishlovatel'skiy ts. byy. Institut.

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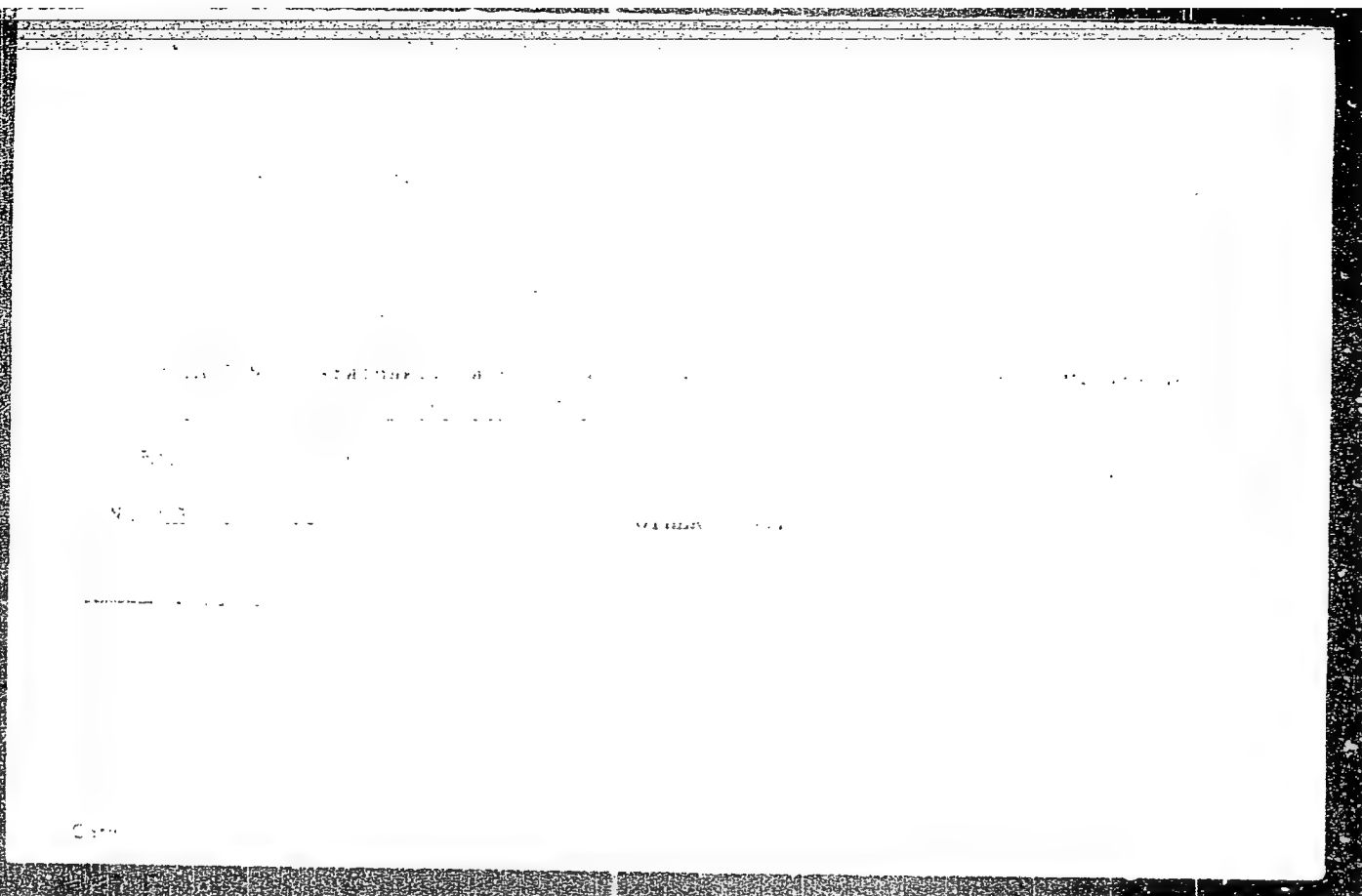


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TEVEROVSKIY, V. M.

Mbrs Dnepropetrovsk Physico-Technical Inst., -1938-.

"On the Formation of Crystallization Centres in Super-Cooled Liquid: i, "Zhur.  
Eksper. i Teoret. Fiz., 9, No. 1, 1939.

PETROCHENKO, P.F.; SHAPIRO, I.I.; TEVEROVSKIY, P.A., inzh.; SOLDATOVA, T.I., inzh.; KOZLOVA, V.I., inzh.; MATOVA, A.D., tekhnik; ALEKSEYEV, S.A., dotsent, red.; CHERNOVA, Z.I., tekhn.red.

[Time norms established in the general machinery industry for finishing and cropping operations in iron, steel and nonferrous metal founding; large-lot and mass production] Obshchemashinostroitel'nye normativy vremeni na ochistno-obrubnye raboty pri proizvodstve chugunnogo, stal'nogo i tavetnogo lit'ia; krupnose-riincoe i massovoe proizvodstvo. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 57 p. (MIRA 13:1)

1. Moscow. Nauchno-issledovatel'skiy institut truda. TSentral'noye byuro promyshlennykh normativov po trudu. 2. Glavnyy inzhener TSentral'nogo byuro promyshlennykh normativov po trudu pri Nauchno-issledovatel'skom institute truda (for Petrochenko). 3. Zavednyushchiy otделom mashinostroyeniya TSentral'nogo byuro promyshlennykh normativov po trudu pri Nauchno-issledovatel'skom institute truda (for Shapiro). 4. Sotrudniki TSentral'nogo byuro promyshlennykh normativov po trudu pri Nauchno-issledovatel'skom institute truda (for Teverovskiy, Soldatova, Kozlova, Matova). (Founding--Standards)

TEVEROVSKIY, YE N.

"Condensation of Particles of an Aerosol in a Turbulent Atmosphere", Izvestiya AN SSSR, Seriya geograf. i fiz., No 1, 1948 (7-19)

SO: U-3039, 11 Mar 1953

PA 38/49T111

TEVEROVSKIY, YE. N.

USSR/Physics  
Condensation  
Saturation Curves

Apr 49

"The Dimensions of Condensation Nuclei and the  
Maximum Possible Supersaturation in Steam Condensa-  
tion," A. G. Bykov, Ye. N. Teverovskiy, 7 pp

"Zhur Eksper i Teoret Fiz" Vol XIX, No 4

Shows that during steam condensation particles  
formed on nuclei of molecular size. Minimum size of  
the nucleus determines maximum possible super-  
saturation of steam for given temperature. The size  
of the primary particle, depending only on substance's  
vapor tension may be determined for the maximum  
38/49T111

USSR/Physics (Contd)

Apr 49

possible supersaturation for each substance. The  
greater the vapor tension, the larger the primary  
particle. Submitted 6 Oct 48.

38/49T111

TEVEROVSKIY, YE. N.

PA 50/49T101

USSR/Physics  
Mechanics of Fluids

Jun 49

"Dimension of the Minimum Pulsations in a Turbulent Stream," M. K. Baranayev, Ye. N. Teverovskiy, E. L. Tregubova, 4 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 5

Magnitudes of true gradients of velocity can be shown to be appreciably greater than average magnitude of maximum gradient of velocity, which is calculated by dissipation of energy in the stream.

Submitted by ACad A. N. Kolomogorov, 14 Apr 49

PA 50/49T101

TEVEROVSKIY, YE. N.

PA 244T63

USSR/Engineering - Hydraulics, Hydraulic  
Conveying Nov 52

"On the Transfer of Heavy Particles Suspended in  
Turbulent Flows," Ye. N. Teverovskiy

"Iz Ak Nauk SSSR Otdel Tekh Nauk" No 11, pp 1742-  
1749

Reviewing practical applications of hydraulic trans-  
fer, states that existing diffusion theory is inac-  
curate in its description of process and must be  
reconstructed accounting for dependence of turbulent  
diffusion coefficient on relation between fall

244T63

velocity of particles and velocity of flow. Ana-  
lyzes also gravitation theory of motion of suspended  
particles and introduces some corrections, stating  
that this theory must take into consideration factor  
that work of suspension is done at expense of energy  
of flow's turbulent motion.

244T63

TEVEROVSKIY, Ye. N.

Subject : USSR/Engineering AID P - 825  
Card 1/1 Pub. 78 - 10/26  
Authors : Genkin, M. A., Minskiy, Ye. M., Kozlov, A. L.,  
Teverovskiy, Ye. N. and Shirokov, F. I.  
Title : Cyclonic separator of the VNII (All-Union Scientific  
Research Institute)  
Periodical : Neft. khoz., v. 32, #9, 41-43, S 1954  
Abstract : The cyclone type of water and dust particle separation  
from natural gas is described. A spiral deflector without  
moving parts is used for turbulent rotation of gas and a  
180° turn for particle separation. Apparatuses of various  
capacities are outlined on 3 drawings. 2 Russian references  
(1950-1951).  
Institution: Scientific Research Institute. Gas Division (NIIOG)  
Submitted : No date

USSR/Chemistry - Gas and air purification TEVEROVSKIY, Ye. N.

FD-1502

Card 1/1 Pub 50-6/19

Author : Zaytsev, M. M.; Teverovskiy, Ye. N., Cand Chem Sci

Title : A high-velocity dust-capturing absorption and heat-exchange apparatus

Periodical : Khim. prom., No 2, 82-87 (18-23), Mar 1955

Abstract : Describe the operational characteristics of turbulent scrubbers (Venturi scrubbers, etc), which can be used for the purification of air and gases from dust. The gases are cooled effectively in these scrubbers by reason of the great surface of the finely dispersed liquid used for scrubbing. Eight references, 2 USSR, both since 1940. Five figures, 2 graphs, 4 tables.

Institution: Scientific Research Institute of Industrial and Sanitary Gas Purification;  
State Planning Institute of Gas Purification (Giprogazoochistka)



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TEVEROVSKIY, Ye.N.; ANDRIANOV, A.P.; MAKAROV, A.I.; AL'PEROVICH, M.A.

"Aerodynamic of industrial apparatus." by I.E. Idel'chik. Reviewed by  
Teverovskiy, Ye.N., Andrianov, A.P., Makarov, A.I., Al'perovich, M.A.  
Khim. prom. 41 no.3:241 Mr '65. (MIRA 18:7)

SOV/124-58-8-8955

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 90 (USSR)

AUTHORS: Teverovskiy, Ye.N., Zaytsev, M.M.

TITLE: The High-speed Dust-catching Heat-exchange-type Absorber  
"TP" (Pyleulavlivayushchiy, absorbtionnyy i teploobmennyy  
apparat "TP" s vysokoskorostnym potokom gaza)

PERIODICAL: Tr. Gos. n.-i. in-ta po prom. i san. ochistke gazov, 1957,  
Nr 1, pp 105-132

ABSTRACT: An examination is made of a dust-catching device characterized by a very thorough gas-cleaning capacity. The device consists of two jointly operating units: The one - a nozzle-type liquid atomizer in a Venturi tube; the other - a drop collector consisting of a uniflow cyclone. The liquid (water) is sprayed into the gas at high velocities (20-150 m/sec). The spray droplets measuring from 6 to 65  $\mu$ . The article includes some theoretical calculations and test data. Bibliography: 21 references.

A.V. Kur'yato

Card 1/1

TEVEROVSKIY, Ye.N.

112-1-216

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957, Nr 1,  
p.34 (USSR)

AUTHOR: Téverovskiy, Ye.N.

TITLE: An Experiment in Operation and Industrial Testing of  
Various Ash Collectors and Recommendations as to Their  
Selection (Opyt ekspluatatsii i promyshlennykh ispytaniy  
razlichnykh zolouloviteley i rekomendatsii po ikh vyboru)

PERIODICAL: Tr.konferentsii po vopr.zoloulavliv., shlakozoloudaleniya  
i shlakozoloispol'zov., Moscow, Gosenergoizdat, 1955,  
pp.9-15.

ABSTRACT: NIIIOGAZ (State Scientific Research Institute of Gas Purifica-  
tion for Industry and Sanitation), and Giprogazoochistka  
(State Institute for the Design and Planning of Structures  
for Gas Purification), made 40 testings of various ash  
collectors installed for purifying flue gas with a spreader-

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112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

type of fuel burning of the near-Moscow and Donets Basin coals. During the inspection of ash collectors their extremely low quality of production and installation was exposed. The component parts of battery cyclones in most cases had inadmissibly large clearances between the coiling devices and the frameworks. The depth of the sinking of the coiling devices was not maintained, the hermeticity of the packing of the lower supporting plate and of the upper supporting grid was not provided for, the geometrical dimensions of the input cross section and of the output helix and of the frameworks and of the exhaust pipes were violated, etc. The operation of ash-collectors was performed inadequately. Hoppers and cyclone parts were found clogged with cinders because of their illtimed unloading, the locks were not hermetic and were unregulated; looseness in the ash-collectors was not eliminated and their surfaces were not insulated. During the testing of the ash-collectors, the initial dust content of gases changed within limits of 0.8 to 8.5

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112-1-216

· An Experiment in Operation and Industrial Testing (Cont.)

grams per normal cu m, depending on the properties of the fuel, the conditions of operation of the furnace, the velocity of the gas in the flue, its length and the degree of its soiling. The total efficiency of the ash-collector also changed within wide limits because of the change in the dispersed composition of the collected cinders. The efficiency of the tested ash-collectors is presented in the table. The concentration of suspended matter in gases past the ash-collectors with a spreader type fuel burning, in grams per normal cu m

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112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

Type of ash-collector	Near-Moscow coals		Donets Basin coals	
	From tests	From calculations	From tests	From calculations
Cyclone burner Battery	0.2 - 0.7	0.1 - 0.4	0.15 - 0.4	0.1 - 0.25
Cyclone NIIOGAZ	0.2 - 0.6	0.1 - 0.35	0.1 - 0.15	0.1 - 0.17
Shutter cinder trap of the VTI (All-Union Heat Engineering Institute im. Dzerzhinskiy)	1 - 2	0.3 - 0.9	—	0.15-0.6

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112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

With the spreader type burning of *APW* (small-size anthracite) the concentration of cinders in the gas past the shutter type of cinder trap amounted to 0.26 grams per normal cu m. Divergencies between experimental and theoretical data are explained by the poor quality of the manufacturing and installation of the ash-collectors. Taking into account considerations of economy, efficiency and operational security of cinder traps for the purification of flue-gases, the author advises the installation of NIIOGAZ cyclones. With limited clearances, it is advisable to install cyclone batteries. A well-timed unloading

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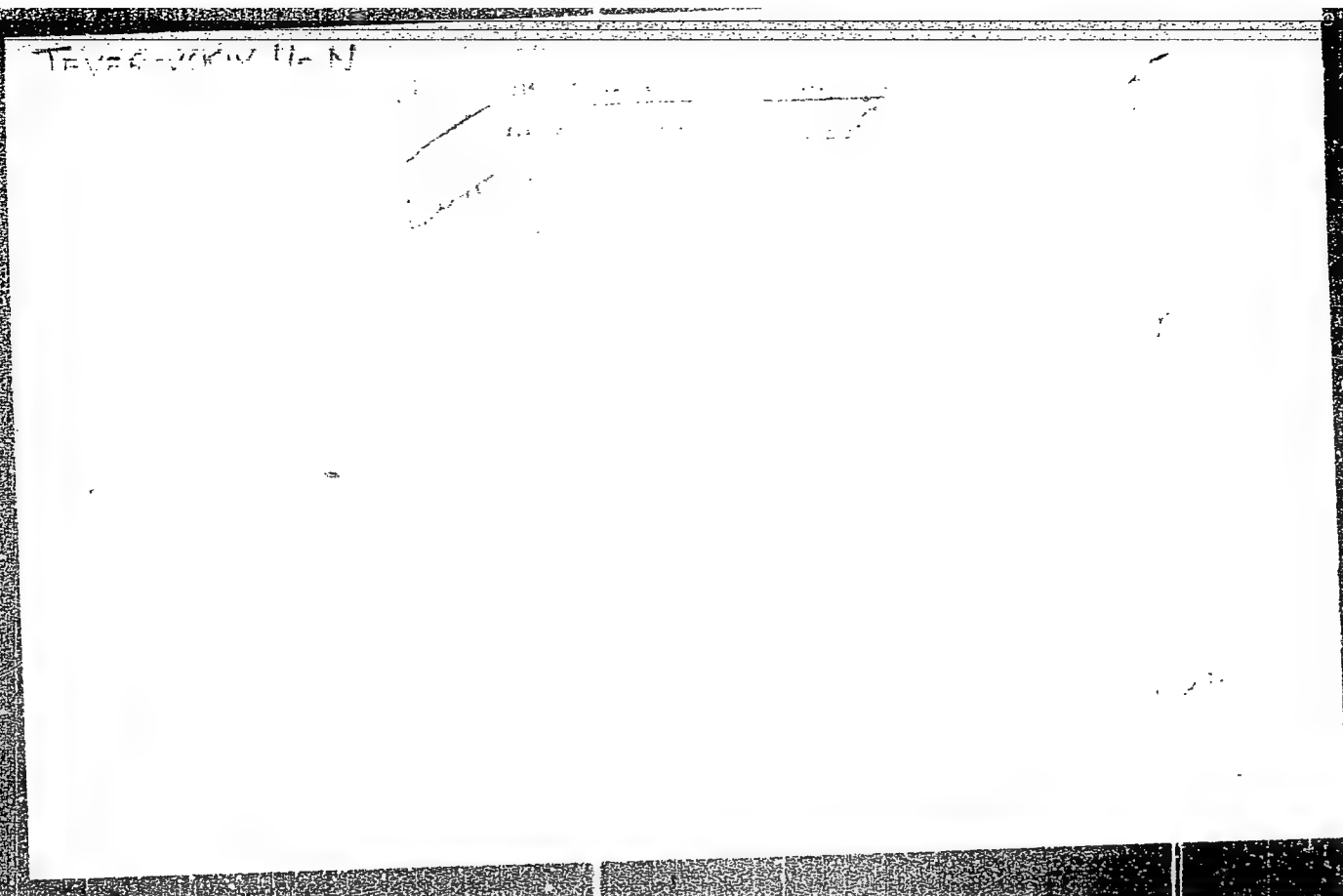
112-1-216

An Experiment in Operation and Industrial Testing (Cont.)

of the deposits from the hopper and the necessary maintenance of the apparatus have to be guaranteed. Special attention should be given to the tightness of the cinder locks. The use of the shutter type of cinder traps is limited because of their insufficient efficiency and lower operational dependability.

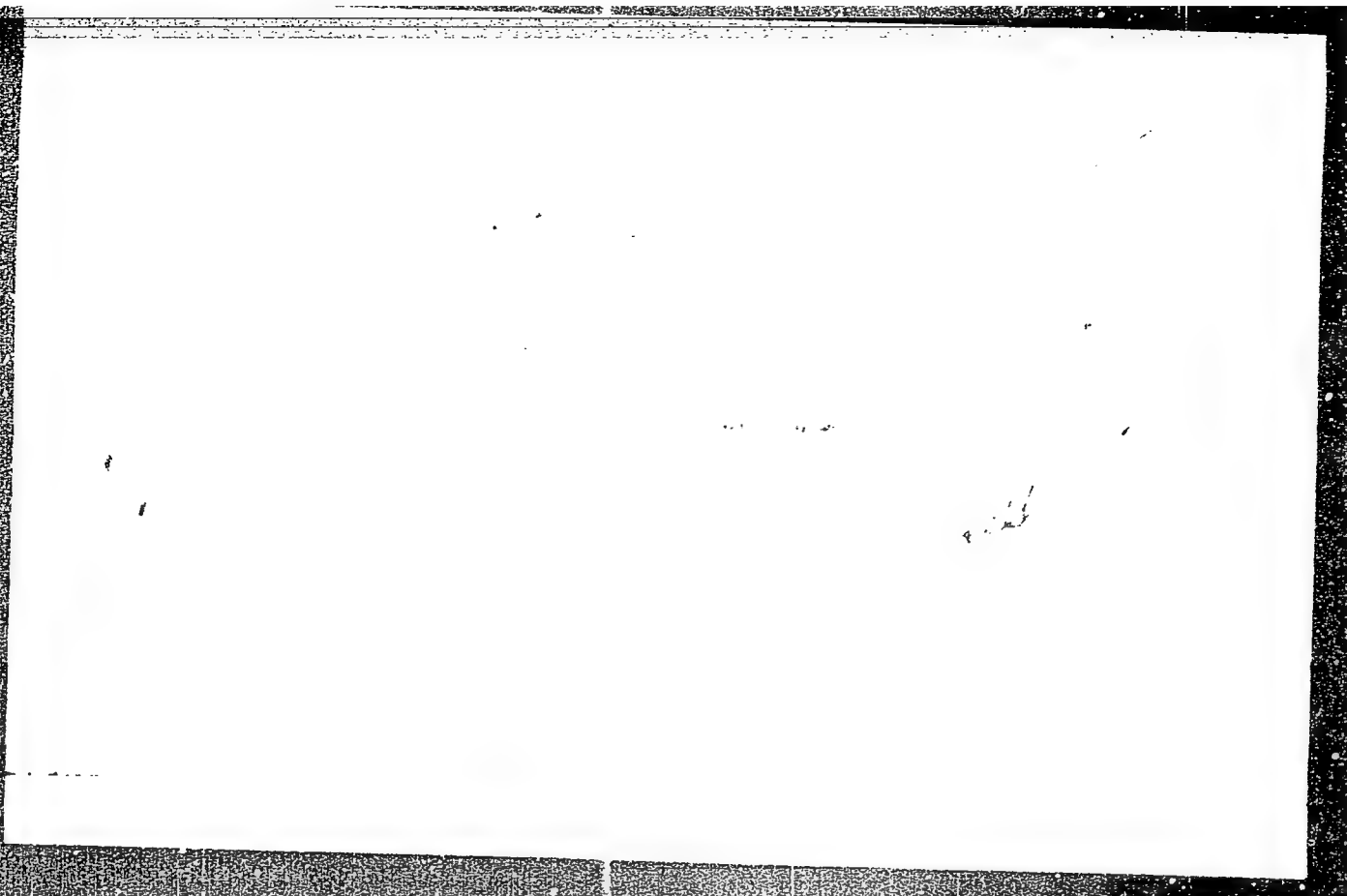
N.F.D.

Card 6/6



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77478  
SOV/103-21-1-9/22

AUTHOR: Teverovskiy, V. I. (Dnepropetrovsk)

TITLE: On a Particular Case of an Impulse System With Variable Pulse Parameters

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 1, pp 64-71 (USSR)

ABSTRACT: In the study are considered impulse systems with periodically changing parameters. A special case is discussed when only one root in the characteristic system equation is changing. 1. Link of the First Order. The equation of the first order link is given in the form:

$$(q - q_0)x(\bar{t}) = -kq_0/\bar{t}). \quad (1.1)$$

where  $\bar{t} = t/T$  and  $q = pT$  are dimensionless variables, and  $T$  is the repetitive period of input signals. Parameters  $q_0$  and  $k$  are variables subordinated to

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On a Particular Case of an Impulse System  
With Variable Pulse Parameters

7/4/8  
SOV/103-21-1-3/22

the following limits:

$$\begin{aligned} q_0 &= q_1 \\ k &= k_1 \quad \text{at } n \leq t \leq n + \gamma, \end{aligned}$$

$$\begin{aligned} q_0 &= q_1 \\ k &= k_1 \quad \text{at } n + \gamma < t < n + 1 \end{aligned}$$

here  $n = 0, 1, 2, \dots$ ,  $\gamma = \frac{\tau}{T}$ ,  $\tau$  — input pulse duration

$$\begin{aligned} \text{and} \quad f(\bar{t}) &= f(n) \quad \text{at } n \leq \bar{t} \leq n + \gamma \\ f(\bar{t}) &= 0 \quad \text{at } n + \gamma < \bar{t} < n + 1 \end{aligned}$$

Applying the Laplace discrete transformation to Eq. (1.1) the following transfer function of the first order impulse system is obtained:

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$$W^*(q) = k_1 \frac{(1 - e^{q_1 \gamma}) e^{q_1' (1-\gamma)}}{e^q - e^{q_1 \text{cp}}} \quad (1.4)$$

where:

$$q_{1 \text{cp}} = q_1 \gamma + q_1' (1 - \gamma).$$

The impulse of system (1.4) at an arbitrary time  
is determined from:

denoting  $t - n = \varepsilon$ , we obtain

$$w[n, \varepsilon] = k_1 (e^{-q_1 \varepsilon} - 1) e^{q_1 \text{cp} n} e^{q_1' \varepsilon} \quad (0 \leq \varepsilon \leq \gamma, \quad n > 0), \quad (1.5)$$

$$w[n, \varepsilon] = k_1 (1 - e^{q_1 \gamma}) e^{q_1 \text{cp} n} e^{q_1' (\varepsilon - \gamma)} \quad (\gamma < \varepsilon < 1, n > 0), \quad (1.6)$$

$$w[0, \varepsilon] = k_1 (1 - e^{q_1 \varepsilon}) \quad (0 \leq \varepsilon \leq \gamma), \quad (1.7)$$

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On a Particular Case of an Impulse System  
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$$w[0, \varepsilon] = k_1 (1 - e^{a_1 \tau}) e^{a_1 (\varepsilon - \tau)} \quad (\tau < \varepsilon < 1). \quad (1.8)$$

2. Second Order System. Figure 1 shows the block diagram of the second order system consisting of two elements: element 1 with variable parameters and element 2 with constant parameters.

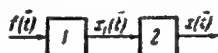


Fig. 1.

This system is described by the following equation:

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$$(q - q_{10}) x_1(\bar{i}) = -k q_{10} / (\bar{i}), \quad (q - q_2) x(\bar{i}) = -q_2 x_1(\bar{i}), \quad (2.1)$$

here  $q_2 = \text{const}$ ,  $q_{10} = q_1$ ,  $k = k_1$ , when  $n \leq \bar{i} \leq n + \gamma$ ,  $q_{10} = q_1$ ,  
 $k = k_1$ , when  $n + \gamma < \bar{i} < n + 1$ .

The discrete transfer function for the astatic system is obtained in a similar manner as under (1) in the form:

$$\begin{aligned} W_a^*(q) &= \\ &= k_1 \frac{[(q_1' - q_1)(1 - e^{q_1 \gamma}) + q_1(e^{q_1'(1-\gamma)} - e^{q_{1cp}}) + \gamma q_1 q_1'] e^q}{q_1 q_1' (e^q - e^{q_{1cp}}) (e^q - 1)} + \\ &\quad + \frac{q_1' (e^{q_{1cp}} - e^{q_1'(1-\gamma)} - \gamma q_1 e^{q_{1cp}})}{q_1 q_1' (e^q - e^{q_{1cp}}) (e^q - 1)}. \end{aligned} \quad (2.13)$$

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With Variable Pulse Parameters

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In the very important case when  $\gamma \ll 1$  Eq. (2.13) is simplified into:

$$W_2^*(q) = k_1 \frac{\gamma q_1 q_2 (e^{q_1} - e^{q_2}) e^q}{(q_1 - q_2) (e^q - e^{q_1 p}) (e^q - e^{q_2})}. \quad (2.14)$$

3. System of an arbitrary order with one variable root of the characteristic equation. A system of any  $r$ -th order is taken. All roots of the characteristic equation are simple, with only one root changing. This system may be shown as a series connection of two elements: (Fig. 2) the variable element 1 and the element 2 described by equation of the  $(r-1)$ -th order.



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Fig. 2.

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The transfer function of the 1st link is given in the form:

$$W_1(q) = -k_1 \frac{q_{10}}{q - q_{10}}, \quad (3.1)$$

where  $q_{10}$  is a variable root having  $q_1$  and  $q_1'$  magnitudes. The transfer function of the constant 2nd link is:

$$W_{r-1}(q) = \frac{P(q)}{Q(q)}, \quad (3.2)$$

where  $Q(q)$  and  $P(q)$  are polynomials with respect to  $q$ , with the order of  $P(q)$  lower than the order of  $Q(q)$ . Then Eq. (3.2) is transformed as follows:

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$$W_{r-1}(q) = \frac{P(q)}{Q(q)} = \sum_{k=1}^{r-1} \frac{P(q_k)}{Q'(q_k)} \frac{1}{q - q_k} = \sum_{k=1}^{r-1} \frac{c_k}{q - q_k}, \quad (3.3)$$

where  $q_k$  are roots of equation  $Q(q) = 0$ ,  $Q'(q_k) = \frac{dQ(q)}{dq} \Big|_{q=q_k}$ .

On the basis of Eq. (3.3) the block diagram of the system is transformed into the form shown on Fig. 3a.

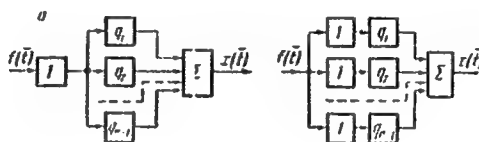


Fig. 3.

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On this Figure  $q_1, q_2, \dots, q_{r-1}$  are links, the transfer functions of which represent the components of the sum (3.3);  $\sum$  is a summation device. Figure 3b shows a system in which the processes proceed in a similar manner as in system shown on Fig. 3a. The discrete transfer function of this system is given in the form:

$$W^*(q) = \sum_{k=1}^{r-1} c_k W_k^*(q), \quad (3.4)$$

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where

$$\begin{aligned}
 W_k^*(q) &= -\frac{1}{q_k} \frac{b_{1k} e^q + b_{0k}}{(e^q - e^{q_{1cp}})(e^q - e^{q_k})}, \\
 b_{1k} &= \frac{q_1 (q_k - q_1') e^{q_k} + q_k (q_1' - q_1) e^{q_k(1-\gamma) + q_1 \gamma}}{(q_1 - q_k)(q_1' - q_k)} + \\
 &+ \frac{q_k (q_1 - q_k) e^{q_{1cp}} + (q_1 - q_k) (q_1' e^{q_k(1-\gamma)} - q_k e^{q_1'(1-\gamma)})}{(q_1 - q_k)(q_1' - q_k)}, \\
 b_{0k} &= e^{q_{1cp} + q_k} + \frac{q_k e^{q_k + q_1'(1-\gamma)} - q_1 e^{q_{1cp} + q_k(1-\gamma)}}{q_1 - q_k}. \quad (3.5)
 \end{aligned}$$

A brief discussion of the result obtained is given.  
The application of this method is given to the  
analysis of the transient states in the radio location  
auto rangefinder. The analysis is made for a  
simplified arrangement. The operation of the

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auto rangefinder is based on the comparison of the position of the impulse reflected from the target with the position of a pair of special selective impulses. These impulses are made to follow the displacement of the echo impulse. The assistance of Ya. Z. Tsyarkin is acknowledged. There are 6 figures; and 5 Soviet references.

SUBMITTED: February 26, 1959

Card 11/11

TEVEROVSKIY, Ye.N.

"Opyt Ekspluatatsii i promyshlennykh Ispytaniy Razlichnykh Zolouloviteley i Rekomendatsii po ikh Vyboru," Proceedings of a Conference on Problems of Ash Removal, Ash and Slag Removal, and Ash and Slag Utilization. (Trudy Konferentsiya Po Voprosam Zoloulavlivaniya, Shlakozoloulavlivaniya i Shlarozoloispol'sovaniya. U.S.S.R., Gosenergoizdat (Moscow: Gosenergoizdat, 1955, 160pp.; abstr. in Teploenergetika (Heat Pwr Engng, Moscow), June 1956, 64). There are ten papers on atmospheric pollution, flue gas cleaning, cyclones, instrumentation, pneumatic removal of ash, ash handling, and the use of ash for heat insulation and construction.

ANDRIANOV, A.P.; ZAYTSEV, M.M.; IDEL'CHIK, I.Ye.; POPOV, D.D.[deceased];  
TEVEROVSKIY, Ye.N.; UZHOV, V.N.; CHUMAK, L.I.; SHAKHOV, G.F.;  
SHIROKOV, F.A.; TOMCHINA, Ye.I., red.; ZAZUL'SKAYA, V.F., tekhn.  
red.

[Battery cyclones; instructions for designing, assembling, and  
operating] Batareinye tsiklony; rukovodiashchie ukazaniya po  
proektirovaniyu, montazhu i ekspluatatsii. 2. izd. Moskva, Gos.  
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1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po khimii.  
(Separators (Machines))



VOVK, V.G., inzh.; POLEZHAYEV, A.A., kand.tekhn.nauk; PYLOV, B.A., kand.  
tekhn.nauk; TEVEROVSKIY, Yu.N., inzh.

Universal braking unit for studying machine transmissions.

Stroitel'nyy mash. 6 no.8:18-21 Ag '61.

(MIRA 14:8)

(Machinery—Transmission devices)

TEVESZ, F.

Five-tube superband. p. 272.

Vol 5, no. 12, Dec. 1955. RADIOTECHNIKA, Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

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TEVESZ, F. The 50-watt amateur transmitter. p. 18.

Vol. 6, No. 1, Jan. 1956.

RADIO TECHNICA

TECHNOLOGY

Budapest, Hungary

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TEVESZ, F.

Modulation index. p.72.

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Vol 6, no. 3, Mar 1946.

SOURCE: EEAL, Vol 5, No. 7, July 1956.

7001 H S

USSR / Farm Animals. Reindeer.

Q-3

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105740.

Author : Mityushev, P. V., Tevi, A. S.

Inst : Not given.

Title : Dependence of the Quality of "Panty"\* on Methods of Their Conservation.

Orig Pub: Karakulevodstvo i averovodstvo, 1957, No 6, 33-36.

Abstract: The method of preservation of "panty" by the use of which their extract exerts the most effective therapeutic action on wounds should be considered the best. Different methods of preserving "panty" are compared and evaluated.

\*Panty are non-ossified antlers of *Cervus elaphus sibiricus* and of some other cervids from which pharmacological preparations are produced for use in various diseases

Card 1/1

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<div style="display: flex; justify-content: space-between;"> <span>CR</span> <span>2D</span> </div> <div style="text-align: center; margin-top: 100px;"> <p>Cement from Kerch Iron and Steel Works blast-furnace slag. A. G. Tsvetkov. <i>Tsvetkov</i>, No. 4/8, 87-9(1939). E. E. Stefanovsky</p> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> <p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p> <p>10000 100000</p> </div> <div> <p>10000 100000</p> </div> </div>																			

L 22134-66 EWT(1)

ACC NR: AP6004937

SOURCE CODE: UR/0056/66/050/001/0199/0201

AUTHOR: Gol'dman, I. I.; Tevikyan, R. V.

ORG: Physics Institute GKAE, Yerevan (Fizicheskiy institut GKAE)

TITLE: Conservation laws for free fields <sup>2)</sup>

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 1, 1966, 199-201

TOPIC TAGS: group theory, electromagnetic field, mathematic transformation, quantum field theory, motion equation

ABSTRACT: In connection with a new relation, having the form of a conservation law of a certain tensor composed from the electromagnetic fields, recently derived by D. M. Lipkin (J. Math. Phys. v. 5, 696, 1964) and later generalized by T. A. Morgan (ibid. p. 1659), the authors point out that these relations were proved by directly using Maxwell's equation, and that the group-theoretical nature of these new conservation laws remains unexplained. They therefore show that the usual equations of motion for the free fields can be obtained by variation of some nonlocal Lagrangian. The type of nonlocality remains to a large extent arbitrary. The relations of Lipkin and Morgan and some other relations are shown to be the con-

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ACC NR: AP6004937

2

sequence of the invariance of the action integral under the transformations of the group. In this formalism it is immaterial whether the mass of the field particle is zero or nonzero. The results obtained can be generalized to the case of an arbitrary free field. The nonlocal transformations in question form a group. The authors thank A. Ts. Amatuni and V. A. Dzhrbashyan for their interest in the problem and discussions. Orig. art. has: 19 formulas.

SUB CODE: 20,12/ SUBM DATE: 22Jul65/ OTH REF: 003

Card 2/2

BK



L 34555-66 PNT(1) LJP(c) 66

ACC NR: APC014030

SOURCE CODE: UR/0056/66/050/004/0911/0914

AUTHOR: Tevikyan, R. V.

ORG: Physics Institute, GKAE, Yerevan (Fizicheskiy institut GKAE)

TITLE: Quantum theory of a particle with electric and magnetic charges

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 4, 1966, 911-914

TOPIC TAGS: quantum theory, spinor, parity principle, CHARGED PARTICLE

ABSTRACT: The author develops a quantum theory for a spinor particle possessing simultaneously electric charge  $e$  and scalar magnetic charge  $g$ , the magnitudes of the electric and magnetic charges being arbitrary. It is shown that the theory developed by N. Cabibbo and E. Ferrari (Nuovo Cim. v. 23, 1146, 1962) is in error. Mandelstam's formulation of quantum electrodynamics without a potential (Ann. of Phys. v. 19, 1, 1962) is used for the description of the particles. In this theory  $P$  and  $T$  parity is not conserved, although  $P$  and  $T$  parity is conserved if  $g$  is regarded as a pseudoscalar. If the operation  $M$  (conjugation of the magnetic charge) is introduced, then the theory is invariant against MCPT transformation. It is concluded that the available experimental data do not exclude the possibility that all particles have a small magnetic charge besides the electric charge. Orig. art. has: 17 formulas.

SUB CODE: 20/ SUBM DATE: 27 May 65/ OTH REF: 004

Card

1/1

22

ARUTYUNYAN, V.M.; VARTANYAN, Yu.L.; CHUBARYAN, E.V.; SHAKHBAZYAN, V.A.; AMATUNI, A.TS.; DZHRBASHYAN, V.A.; MELIK-BARKHUDAROV, T.K.; TEVIKYAN, R.V.; BERESTETSKIY, V.B., prof., red.; SHTIBEN, R.A., red. izd-va; KAPLANYAN, M.A., tekhn. red.

[Problems in the theory of strong and weak interactions of elementary particles; lectures] Voprosy teorii sil'nykh i slabyykh vzaimodeistvii elementarnykh chastits; lektsii. Pod obshchei red. V.B.Berestetskogo. Erevan, Izd-vo Akad. nauk Armianskoi DDR, 1962. 190 p. (MIRA 15:5)

1. Akademiya nauk Armyanskoy SSR. Fizicheskiy institut. (Nuclear reactions)

S/056/62/042/003/022/049  
B102/B138

AUTHOR: Tevikyan, R. V.

TITLE: Spectral representation of matrix elements

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,  
no. 3, 1962, 779 - 782

TEXT: The integral Dyson representation (Phys. Rev. 110, 1460, 1958) is generalized on basis of the Schwinger and Gribov methods (V. N. Gribov, ZhETF, 34, 1310, 1958), and spectral representations are derived for the matrix element of the product of n scalar Heisenberg operators. For three components  $F_{123}^{(-)}(x_{12}, x_{23}) = \langle 0 | \varphi_1(x_1) \varphi_2(x_2) \varphi_3(x_3) | 0 \rangle$ ,  $x_{ik} = x_i - x_k$ ,

$$F_{123}^{(-)}(x_{12}, x_{23}) = (2\pi i)^3 \int_0^\infty D^{(-)}(x_{12}, \kappa_{12}) D^{(-)}(x_{13}, \kappa_{13}) D^{(-)}(x_{23}, \kappa_{23}) \times \quad (7)$$

$$\times I_{123}(\kappa_{12}^2, \kappa_{13}^2, \kappa_{23}^2) d\kappa_{12}^2 d\kappa_{13}^2 d\kappa_{23}^2;$$

$$D^{(-)}(x, m) = \frac{i}{(2\pi)^3} \int e^{ikx} (-k^0) \delta(k^2 - m^2) dk.$$

is obtained. For n = 1, 2 components

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Spectral representation ...

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$$F_{12...n}(x_{12}, x_{23}, \dots, x_{n-1,n}) = \langle P | \varphi_1(x_1 - \bar{x}) \varphi_2(x_2 - \bar{x}) \dots \varphi_n(x_n - \bar{x}) | Q \rangle', \quad (14),$$

$$\bar{x} = (x_1 + x_2 + \dots + x_n) / n,$$

$$\begin{aligned} F_{12...n}(x_{12}, x_{23}, \dots, x_{n-1,n}) = \\ = (2\pi i)^{3n(n-1)/2} \int_0^\infty D^{(-)}(x_{12}, x_{12}) D^{(-)}(x_{23}, x_{23}) \dots D^{(-)}(x_{n-1,n}, x_{n-1,n}) \times \\ \times I_{12...n}(x_{12}^2, x_{23}^2, \dots, x_{n-1,n}^2, x_{12}, x_{23}, \dots, x_{n-1,n}) dx_{12}^2 dx_{23}^2 \dots dx_{n-1,n}^2 \end{aligned} \quad (15) \text{ is obtained with}$$

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Spectral representation ...

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$$\tilde{T}_{12 \dots n}(\kappa_{12}^2, \kappa_{13}^2, \dots, \kappa_{n-1, n}^2, u_1, u_2, \dots, u_{n-1}) \neq 0$$

$$\begin{aligned} \kappa_{12} + \kappa_{13} + \dots + \kappa_{1n} &\geq \max \{0, m_{12 \dots n}^{13} - \sqrt{((n-1)P + Q)/n + u_1^2}\}, \\ \kappa_{12} + \kappa_{14} + \dots + \kappa_{1n} + \kappa_{23} + \kappa_{24} + \dots + \kappa_{2n} &\geq \\ &\geq \max \{0, m_{12 \dots n}^{23} - \sqrt{((n-2)P + 2Q)/n + u_2^2}\}, \end{aligned} \quad (16).$$

$$\begin{aligned} \kappa_{1n} + \kappa_{2n} + \dots + \kappa_{n-1, n} &\geq \max \{0, m_{12 \dots n}^{n-1, n} - \sqrt{([P + (n-1)Q]/n + u_{n-1})^2}\}, \\ [(n-1)P + Q]/n + u_1, [(n-2)P + 2Q]/n + \\ &+ u_2, \dots, [P + (n-1)Q]/n + u_{n-1} \in L^+. \end{aligned}$$

There are 3 references: 1 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: T. Schwinger. Proc. of Seventh Rochester Conference on High Energy Phys., 1957, sec. IV, p. 1, F. Dyson. Phys. Rev. 110, 1460, 1958.

ASSOCIATION: Fizicheskiy institut Akademii nauk Armyanskoy SSR (Physics Institute of the Academy of Sciences, Armyanskaya SSR)

Card 3/4

Spectral representation ...

S/056/62/042/003/022/049  
B102/B138

SUBMITTED: July 3, 1961

Card 4/4

TEVIKYAN, R.V.

Spectral representations of matrix elements. Zhur. eksp. i teor.  
fiz. 42 no.3:779-782 Mr '62. (MIRA 15:4)

1. Fizicheskiy institut AN Armyanskoy SSR.  
(Matrix mechanics) (Operators (Mathematics))

TEVIKYAN, R. V. Cand Phys-Math Sci \*\* (diss) "On the Block<sup>n</sup>-Nordsieck approximation in Green's theory of functions. Improvement of formulas of the theory of disturbances." Mos, 1958. 11 pp (Mos Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov), 120 copies. Bibliography at end of text (15 titles), (KL, 11-58, 112)



TEVIKYAN, R.V.

$\pi$ -electron Green's function in Bloch-Nordsieck approximation. Zhur.  
eksp. i teor. fiz. 33 no.5:1304 N '57. (MIRA 11:3)

1. Fizicheskiy institut AN ArmSSR.  
(Potential, Theory of ) (Electrons)

TEVIKYAN, R. V.

AUTHOR: Tevikyan, R. V.,

56-2-23/47

TITLE: Note on the Improvement of Perturbation Theory Formulae (Ob  
uluchshenii formul teorii vozmushcheniy)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 2(8),  
pp. 478-480, (USSR)

ABSTRACT: In the paper under consideration a method described earlier is applied to the investigation of the Compton effect and of the scattering of an electron and of a positron at an electron in the case of great energies, taking into consideration the polarization of the vacuum. A transformation of the generalized vertex part and of the green functions for two electrons must be added to the group of finite transformations for the renormalized kernels. With the use of these transformations functional equations for the green functions can be obtained. A formula is also given for the green function of the photon, as well as for the generalized vertex part for the Compton effect in the range of great energies. Subsequently the radiation corrections for the Compton effect are computed. The differential cross section for the n-fold Compton effect with an emission of an arbitrary number of long wave photons is given and discussed. Finally the author discusses the scattering of an electron on an electron and gives differential cross-sections for a number of special cases. (There are no figures and no references).

Card 1/2

Note on the Improvement of Perturbation Theory Formulae. 56-2-23/47

ASSOCIATION: Yerevan State University (Yerevanskiy gosudarstvennyy universitet)

SUBMITTED: February 20, 1957

Card 2/2

12 FIA. XFA. A. V.

AUTHOR: Tevikyan, R.V. 56-5-41/46

TITLE: Green's n-Electron Function in the Bloch-Nordsieck Approximation  
(n-elektronnaya funktsiyagrina v priblizhenii Blokha-Nordsika)

PERIODICAL: Zhurnal Eksperim. i Teoret.Fiziki, 1957, Vol. 33, Nr 5,  
pp.1304-1304 (USSR)

ABSTRACT: On the basis of the results obtained by Schwinger (ref.1) for  
Green's n-electron function a new way of writing for  $G_n$  is intro-  
duced, after the matrix  $\int \mu$  was replaced by c-numbers. An exact  
solution is given for the  $G_n$  as well as the  $G_{1n}$ -equation. The prob-  
ability of radiation of n-photons of low energy can be expressed  
by Poisson's equation. There are 3 references, 1 of which is Slavic.

ASSOCIATION: Physics Institute of the AN Armenian SSR (Fizicheskiy institut  
Akademii nauk Armyanskoy SSR)

SUBMITTED: July 5, 1957

AVAILABLE: Library of Congress

Card 1/1

TEVFIKOV, A.G.

Sulfite bleaching of multicolored sephyr yarn. Tekstil'. Prom. 12, No.11,  
39 '52. (MLRA 5:11)  
(CA 47 no.22:12822 '53)

1. TEVFIKOV, A. G.
2. USSR (600)
4. Cotton Finishing
7. Sulfite method for bleaching colored zephyr cloth, Tekst. prom., 12, No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.



TEVI, A. S.

3547<sup>0</sup>. Opyt lecheniya revmatizma i ishialgii pchelinyim vzhalleniem. Pchelovodstvo, 1949, No. 11, s. 55-56.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949



TEVIKYAN, R.V.

56-6-41/56

AUTHOR  
TITLE

TEVIKYAN, R.V.

GREEN'S Function for Two Electrons in the Approximation

by BLOCH-NORDSICK.

(Dvukhelektronnaya funktsiya Grina s priblizhenii Blokh-Nordsika. - Russian)

PERIODICAL

Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 32, Nr 6, pp 1573-1574 (USSR)

ABSTRACT

At first SCHWINGER'S equation for GREEN'S function of two electrons in BLOCH-NORDSICK'S approximation is explicitly written down, and the equation for GREEN'S function of an electron is added. Next, the solution ansatz for the equation of the two-electron function is written down. For the purpose of solving the equation for  $G_{12}$ , the author used the same method as used in a previous work. This equation for  $G_{12}$  is then also written down for the momentum space and is solved by means of FOK'S method of eigentime; the solution is also written down explicitly. No polarization of the vacuum exists in BLOCH-NORDSICK'S approximation; the relations resulting therefrom are given. After some computing the following is found:

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56-6-13/56  
GREEN'S Function for Two Electrons in the Approximation  
by BLOCH-NORDSICK.

$$= i \int_0^{\infty} dv e^{-\varepsilon v} e^{-i(m-up_1)v} + f(v) \exp \left\{ -\sqrt{4\pi \frac{e\hbar\mu}{(2\pi)^2}} \right.$$

$$\left. \frac{e^{-i(up)v} - 1}{(up)} A_{\mu}(p) dp \right\}$$

The divergences contained in the function  $G_{12}$  are eliminated by renormalization. By means of the method discussed here also GREEN'S functions of three or more electrons in the approximation by BLOCH-NORDSICK can be determined, but then rather complicated expressions are obtained. (No Illustrations)  
State University YEREVAN (Yerevanskiy gosudarstvennyy universitet.- Russia)

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE:

20.2. 1957.

Library of Congress.

CARD 2/2

TEVICHYAN, R.V.

56-6-42/56

**AUTHOR:**

TEVICHYAN, R.V.

**TITLE:**

GREEN'S Function in Scalar Electrodynamics in BLOCH-NORDSICK Approximation. (Funktsiya Grina v skalyarnoy elektrodinamike v priblizhenii Blokha-Nordsika, Russian)

**PERIODICAL:**

Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 6, p 1575- (U.S.S.R.)

**ABSTRACT:**

The present paper investigates GREEN'S function of scalar electrodynamics in BLOCH-NORDSICK approximation by a method already previously employed. This method entails disregarding the recoil of the particle. On this occasion, as is known, no infrared catastrophe occurs. First, an equation for GREEN'S function on scalar electrodynamics is given. By making use of the invariance of GREEN'S function with respect to translation, the aforementioned equation is written down first in momentum representation and then in the BLOCH-NORDSICK approximation. Also GREEN'S function of the photon is written down in this approximation. The BLOCH-NORDSICK equation is rigorously solved by FOK'S method of eigentime. On this occasion the terms containing the auxiliary mass  $M$  are removed by renormalization. The renormalized GREEN'S function

Card 1/2

56-6-42/56  
GREEN'S Function in Scalar Electrodynamics in BLOCH-NORDSICK  
Approximation.

is then explicitly written down and with the help of this  
GREEN'S function the probability of the following process is  
computed: A particle is scattered in an exterior field; on  
this occasion it radiates any number of long-wave photons and  
n-photons with energies that are ranged within a certain  
interval. (No Illustrations).

ASSOCIATION: State University of Yerevan. (Yerevanskiy gosudarstvennyy  
universitet)  
PRESENTED BY:  
SUBMITTED: 20.2.1957  
AVAILABLE: Library of Congress

Card 2/2

TEVIKYAN, R.V.

Category : USSR/Theoretical Physics - Quantum Electrodynamics

B-5

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 2944

Author : Tevikyan, R.V.

Title : The Solution of the Schwinger Equations in the Bloch-Nordsieck Model.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 5, 949-951

Abstract : A method for the approximate solution of the Dirac equation, proposed by Bloch and Nordsieck (Bloch F., Nordsieck, A., Physical Review, 1937, 52, 54) for the solution of the problem of the scattering of an electron in an external field, which is valid in the region of small momenta, is used for an approximate solution of equations for the single-electron Green's function. The zero approximation of this method, which is the only one considered by the author, consists of replacing the  $\gamma^\alpha$  matrices in the original equation by the c-numbers  $\alpha^\alpha$  ( $\alpha=0, 1, 2, 3$ ), after which the equation is solved rigorously. The final expression is given for the renormalized Green's function, which in the particular case when there is no source is analogous to the expression obtained by A.A. Abrikosov (Referat Zh. Fizika, 1955, 15691).

Card : 1/1

TEVI, A.S.

Mar 49

USSR/Medicine - Honey  
Medicine - Wounds, Therapy

"The Therapeutic Significance of Honey," Prof  
D. M. Rossiyskiy, Hon Worker of Sci, A. S. Tevi,  
1 p

"Tel'dsher i Akusherka" No 3

Honey was used with good results in treating  
wounds and dystrophic cases during World War II.  
Dressings saturated with honey were used in a  
number of hospitals and clinics and produced good  
therapeutic results by accelerating regeneration  
and inhibiting pathogenic processes. Many

41/49T65

FDB

Mar 49

USSR/Medicine - Honey (Contd.)

Moscow therapeutic institutes are using honey  
for gastric and duodenal tumors.

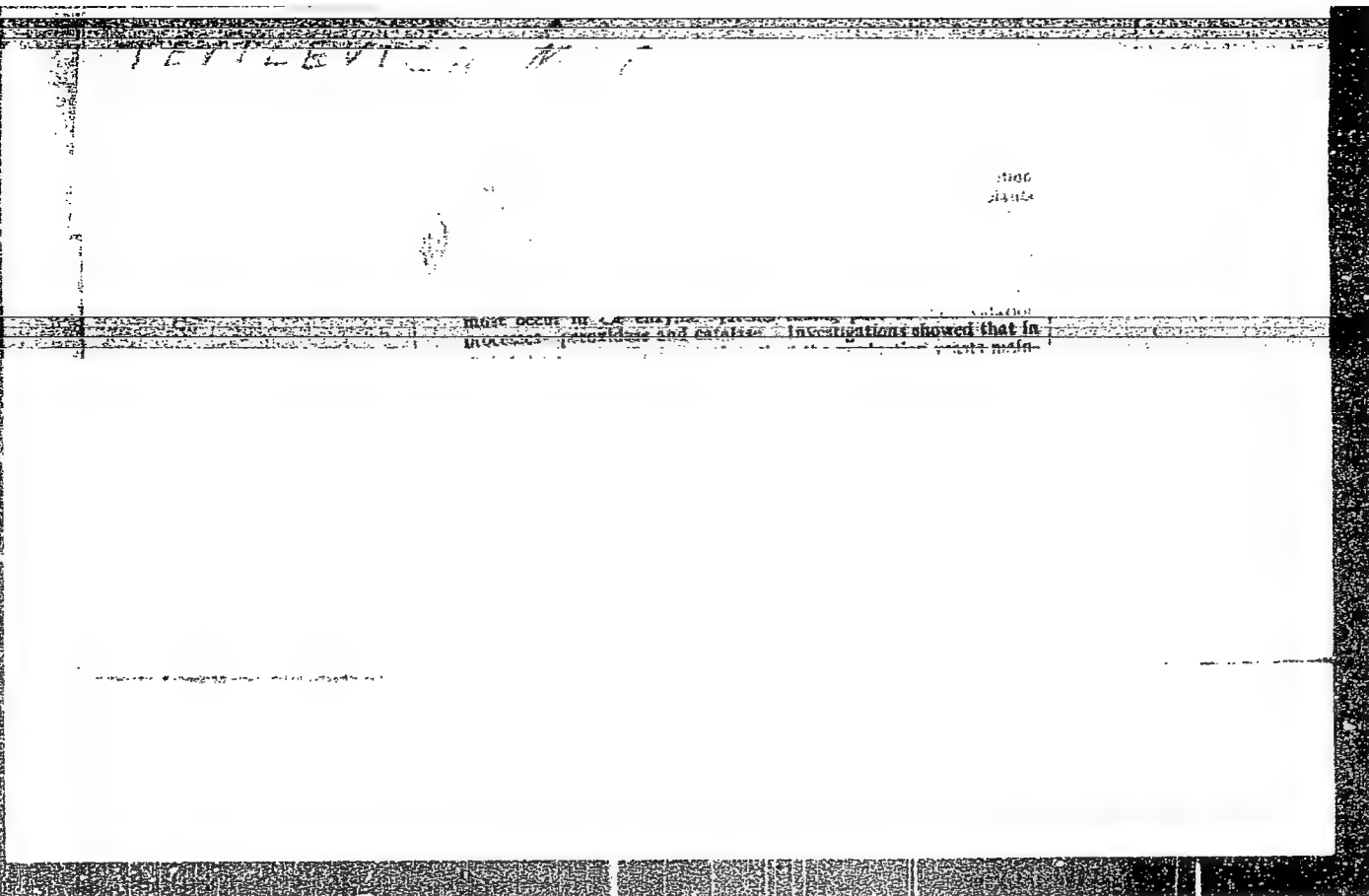
FDB

41/49T65

NEPOMNYASHCHA, M.L.; MEDVINS'KA, L.Yu.; TEVILEVICH, M.B.

Secondary phagoresistant cultures of *Streptococcus lactis*.  
Mikrobiol.zhur. 15 no.2:56-66 '53. (MLRA 7:3)

1. Z Institutu mikrobiologii AN URSR.  
(*Streptococcus lactis*) (Bacteriophagy)





TEVILEVICH, M.B.

NEPOMNYASHCHA, M.I.; TEVILEVICH, M.B.

Seasonal disturbances of lactic acid fermentation by *Str. lactis* in milk. Report No.1: Vitamin B complex requirements of *Streptococcus lactis*. Mikrobiol. zhur. 17 no.1:28-34 '55 (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSS

(VITAMIN B COMPLEX, metabolism,

*Streptoc. lactis* in lactic fermentation, seasonal variations) (Uk)

(STREPTOCOCCUS,

*lactis*, seasonal variations in lactic fermentation & vitamin B complex requirement) (Uk)

(MILK, microbiology,

*Streptoc. lactis*, seasonal variations in vitamin B complex requirement) (Uk)

TEVILEVICH, M.B.  
NEPOMNYASHCHA, M.L.; TEVILEVICH, M.B.

Seasonal disturbances of lactic acid fermentation by Str. lactis in milk. Report No.2: Vitality of Streptococcus lactis in milk in various seasons. Mikrobiol. zhur. 17 no.1:35-40 '55 (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR.  
(STREPTOCOCCUS,

lactis, vitality in milk in various seasons) (Uk)

(MILK, microbiology,

Streptoc. lactis, vitality in various seasons) (Uk)

*Seasonal disturbances of lactic acid fermentation of milk*  
NEPOMNYASHCHA, M.L.; TEVILEVICH, M.B.

Seasonal disturbances of lactic acid fermentation of milk. Report  
No.3: Selection of Str. lactis culture with low degree of  
sensitivity to seasonal variations in the composition of milk.  
Mikrobiol. zhur. 17 no.2:11-18 '55 (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR.  
(STREPTOCOCCUS,

lactis, cultures resist. to seasonal variations of milk  
composition) (Uk)

(MILK, microbiology,

Streptoc. lactis, cultures resist. to seasonal variations  
of milk composition) (Uk)

TEVILEVICH, M. B.

USSR/Chemical Technology. Chemical Products and Their Application -- Fermentation industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6472

Author: Nepomnyashchaya, M. L., Medvinskaya, L. Yu., Karpenko, M. K.,  
Tevilevich, M. B.

Institution: None

Title: Some Biological Properties of Production Yeast on Operation in Accordance with the Withdrawal Method

Original

Publication: Spirt. prom-st', 1955, No 3, 29-30

Abstract: A number of plants have been operating according to the method utilizing fermenting mash in lieu of yeast, which had been proposed by Orlovskiy, Ya. K. (Referat Zhur - Khimiya, 1955, 53936). To determine changes in biological properties of withdrawn yeast, after its prolonged utilization, detailed tests have been conducted, the results of which have revealed that withdrawn yeast adapts itself to the new conditions and, in the absence of infection, exhibits a high

Card 1/2

USSR/Chemical Technology. Chemical Products and Their Application -- Fermentation  
Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6472

Abstract: and almost equal rate of fermentation during all of its stages.  
This indicates that under manufacturing conditions there takes  
place a selection of yeasts best adapted for the withdrawal method.

Card 2/2

TEVILYEVICH, M.B.

Determining catalase and peroxidase in commercial yeast *Saccharomyces cerevisiae* (race No. 12) from distilling plants using inoculum.  
Mikrobiol. zhur. 17 no.4:25-29 '55 (MLRA 10:5)

1. Z Institutu mikrobiologii AN URSR  
(YEAST) (CATALASE) (PEROXIDASES)

NEPOMNYASHCHAYA, M.L.; MEDVINSKAYA, L.Yu.; KARPENKO, M.K.; TEVILEVICH, M.B.

Biological characteristics of distillers' yeast in connection with  
using the yeast transfer method. Spirt.prom.21 no.3:29-30 '55.

1. Institut mikrobiologii imeni akademika Zabolotnogo (MLRA 8:12)  
(Yeast)

TEVILEVICH, M.B. [Tevilevych, M.B.)

Fermenting force of Streptococcus lactis cultures on milk  
during various seasons of the year. Mikrobiol. zhur. 20.  
no.4:13-18'58. (MIRA 16:8)

1. Institut mikrobiologii AN UkrSSR.  
(STREPTOCOCCUS LACTIS) (MILK--BACTERIOLOGY)



TEVILEVICH, M.B.

Vitamin requirements and synthesis of certain B vitamins in cultures  
of Streptococcus lactis. Trudy Inst. mikrobiol. no. 6:80-86 '59.  
(MIRA 13:10)

1. Institut mikrobiologii AN USSR.  
(LACTIC ACID BACTERIA) (VITAMINS—B)

KVASNIKOV, Ye.I. [Kvasnykov, IE.I.]; TEVILEVICH, M.B. [Tevilevych, M.B.];  
SLYUSARENKO, T.P.

New stimulant of the reproduction of baker's yeast cultivated on sugar  
beet molasses. Mikrobiol. zhur. 26 no.5:3-8 '64. (MIRA 18:7)

1. Institut mikrobiologii i virusologii AN UkrSSR.

TEVIS, P. I.

PDD

178759

USSR/Electricity - Furnaces, Electric

Apr 51

"Electric Furnace Unit for Light Alloys," P. I. Tevlar,  
S. D. Belov, Engineers

"Elektrichestvo" No 4, pp 65, 67

Authors propose method for treating light alloys in  
elevated elec furnace units which would do away with  
saltwater baths now used. Latter are very dangerous  
from fire standpoint and also very expensive. Harden-  
ing, annealing, and aging are all carried out in the  
unit. One such unit for hardening, annealing and  
aging of alloy V-95 with inside dimensions 6,400 x  
1,200 x 1,000 has been operating at mach-bldg plant

PDD

178759

USSR/Electricity - Furnaces, Electric  
(Contd)

Apr 51

since Jun 49. Authors were awarded 2d prize in All-  
Union Sci and Tech Soc of Power Engineers' 1949 com-  
petition for elec power econ. Submitted 29 Dec 50.

TEVIS, P. I.

"Electric Furnace Unit for Light Alloys," Elektrichestvo, No. 4, 1951.  
All-Union Sci. & Tech. Soc. Power Engineer 2nd Prize, 1949, elect. power economy.

TEVKIN, Aleksandr, tokar', brigadir kollektiva kommunisticheskogo truda

Our cherished thoughts and hopes. Sov. profsoiuzy 16 no.19:6 0 '60.  
(MIRA 13:10)

1. Moskovskiy zavod imeni Vladimira Il'icha.  
(World politics) (United nations)

TEVLIN, A. M.

"Geometric Method for Investigations of Three-Dimensional Gearing in Application to the Calculation of Spiral-Bevel and Hypoid Gearing." Sub 11 Jun 51, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

TEVLIN, A.M.

CHETVERUKHIN, Nikolay Fedorovich; LEVITSKIY, Vladimir Sergeyevich;  
PRYANISHNIKOVA, Zoya Ivanovna, ~~TEVLIN, Abram Maksimovich~~, FEDOTOV,  
Georgiy Ivanovich; KOTOV, I.I., redaktor; TSVETKOV, A.T., redaktor;  
GAVRILOV, S.S., tekhnicheskiy redaktor

[A course in descriptive geometry] Kurs nachertatel'noi geometrii.  
Pod red. N.F.Chetverukhina. Moskva, Gos. izd-vo tekhniko-teoret.  
lit-ry, 1956. 435 p. (MLRA 10:2)  
(Geometry, Descriptive)

TEVLIN, A. M.

"Geometrical Method for Investigating Spatial Gearings in Application to the Calculation of Spiral Bevel and Hypoid Gears." Thesis for degree of Cand Technical Sci. Sub 20 Nov 50, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva. Jan-Dec. 1950.



TEVLIN, A. M.

Cand Tech Sci

Dissertation: "Geometrical Method for Investigating Spatial Gearings In  
Application to the Calculation of Spiral Bevel and Hypoid Gears."

20/11/50

Moscow Order of Lenin Aviation Inst

ementi Sergo Ordzhonikidze.

**80 Vecheryaya Moskva**  
**Sum 71**

38045

S/145/62/000/002/007/009  
D262/D308

10.6400  
AUTHOR: Tevlin, A.M., Candidate of Technical Sciences  
TITLE: Helical projection and its application in solving geometrical and technical problems  
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 2, 1962, 130 - 141

TEXT: The geometrical principles of the new method of curvilinear projection of 3-dimensional objects on a plane is presented. The projecting lines are helical lines with a common axis and the same pitch H or parameter K, instead of straight lines. The parameter K is found from

$$k = r \operatorname{tg} \beta = \frac{z}{q} = \frac{H}{2\pi}, \quad (1)$$

where r - radius, and  $\beta$  - angle of ascent. Several typical constructions are shown and discussed in detail. They include: Straight line parallel to, and intersecting the axis of the helix at arbitrary angles; point of intersection of a straight line with a spiral sur-

Card 1/2

Helical projection and its ...

S/145/62/000/002/007/009  
D262/D308

face; point of intersection of straight lines with helical surface;  
line of intersection of a helical surface with a sphere. It is sta-  
ted that this method can be applied effectively to various problems  
in many fields of machine design where helical surfaces are used.  
There are 8 figures.

ASSOCIATION: Moskovskiy aviatsionnyy institut (Moscow Aviation  
Institute)

SUBMITTED: March 1, 1961

Card 2/2

NIKOLAYEVSKIY, Georgiy Konstantinovich; PANOV, Vladimir Stepanovich;  
TOMAREVSKAYA, Yevgeniya Stepanovna; SITNIKOV, Vladimir  
Stepanovich; CHETVERUKHIN, N.F.; LEVITSKIY, V.S.;  
PRYANISHNIKOVA, Z.I.; TEVLIN, A.M.; FEDOTOV, G.I.;  
DMITRENKO, Ye.P., otv. red.; KURILOVA, T.M., red.;  
NESTERENKO, A.S., red.; ALEKSANDROVA, G.P., tekhn.red.

[Required practice work in descriptive geometry] Obiaza-  
tel'nyi praktikum po nachertatel'noi geometrii. Khar'kov,  
Khar'kovskii gos.univ., 1963. 122 p. (MIRA 17:1)